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| EXAMINER | |
|---|---|
| STULTZ, JESSICA T | |

| ART UNIT | PAPER NUMBER |
|---|---|
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Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/719,222 | JILANI ET AL. | |
| | Examiner | Art Unit | |
| | Jessica T. Stultz | 2873 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *23 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-24,31-40 and 47-52* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24,31-40 and 47-52* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *0405*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Objections*

Claim 52 is objected to because of the following informalities: "wherein an re-positioning" should be "wherein any re-positioning". Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4-7, 13, 16-19, 31-33, 35-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Meier et al.

Regarding claim 1, Meier et al discloses a micro-mirror device comprising: a micro-mirror (Column 8, lines 16-63, wherein the micro-mirror is "302", Figures 3-4); and a flexure spring (Column 8, lines 16-63, wherein the flexure spring is spring ring "328", Figures 3-4) supporting the micro-mirror (Column 8, lines 16-63, wherein the spring "328" flexes due to contact with mirror "302" at nub "330" and therefore supports mirror "302", as shown in Figures 3-7); wherein the flexure spring is configured to store potential energy during movement of the micro-mirror that is released as kinetic energy to drive movement of the micro-mirror when the micro-mirror is re-oriented (Column 8, lines 31-49, wherein the spring ring "328" stores potential energy when the mirror is deflected and releases the stored energy when the mirror "302" is returned to the undeflected state, i.e. re-oriented, Figures 3-4).

Regarding claim 4, Meier et al further discloses electrodes for electrostatically driving the flexure spring to controllably orient the micro-mirror (Column 8, lines 50-63, wherein the electrodes "310" drive the spring "328" to orient micro-mirror "302", Figures 3-4).

Regarding claim 5, Meier et al further discloses drive circuitry for driving the spring to orient the micro-mirror (Column 8, lines 50-63 and Column 16, lines 16-19, wherein the electrodes "310" and metallization "312" comprise the drive circuitry that drives the spring "328" to orient micro-mirror "302", Figures 3-4).

Regarding claims 6-7, Meier et al further discloses that the flexure spring is supported on a substrate, specifically a silicon substrate (Column 5, lines 20-54, wherein the silicon substrate is "104", Figures 3-4).

Regarding claim 13, Meier et al discloses an array of micro-mirrors comprising (Column 8, lines 16-63, wherein the DMC comprises an array of micro-mirrors "302", Figure 3): a plurality of micro-mirrors (Column 8, lines 16-63, wherein the micro-mirrors are "302", Figure 3); and a flexure spring (Column 8, lines 16-63, wherein the flexure springs are "328", Figures 3-4) supporting each micro-mirror (Column 8, lines 16-63, wherein the spring "328" flexes due to contact with mirror "302" at nub "330" and therefore supports mirror "302", as shown in Figures 3-7); wherein each flexure spring is configured to store potential energy during movement of a corresponding micro-mirror that is released as kinetic energy to drive movement of the corresponding micro-mirror when the corresponding micro-mirror is re-oriented (Column 8, lines 31-49, wherein the spring ring "328" stores potential energy when the mirror is deflected and releases the stored energy when the mirror "302" is returned to the undeflected state, i.e. re-oriented, Figures 3-4).

Regarding claim 16, Meier et al further discloses a corresponding set of electrodes for electrostatically driving the flexure spring to controllably orient the micro-mirror (Column 8, lines 50-63, wherein the electrodes "310" drive the spring "328" to orient micro-mirror "302", Figures 3-4).

Regarding claim 17, Meier et al further discloses drive circuitry for driving the springs to orient the micro-mirror in response to incoming image data (Column 5, lines 21-36, Column 8, lines 50-63, Column 16, lines 16-19, and Column 18, lines 1-15, wherein the electrodes "310" and metallization "312" comprise the drive circuitry that drives the spring "328" to orient micro-mirror "302" in response to incoming image data, Figures 3-4).

Regarding claims 18-19, Meier et al further discloses that the flexure springs are supported on a substrate, specifically a silicon substrate (Column 5, lines 20-54, wherein the silicon substrate is "104", Figures 3-4).

Regarding claim 31, Meier et al discloses a spatial light modulation device (Column 1, lines 36-44, wherein the DMD is a light modulation device, Figures 3-4) comprising: a micro-mirror (Column 8, lines 16-63, wherein the micro-mirror is "302", Figures 3-4); and a pliant flexure (Column 8, lines 16-63, wherein the flexure spring is "328", Figures 3-4) supporting the micro-mirror (Column 8, lines 16-63, wherein the spring "328" flexes due to contact with mirror "302" at nub "330" and therefore supports mirror "302", as shown in Figures 3-7); the flexure having a bias (Column 8, lines 16-63, wherein the flexure supporting the micro-mirror "302" is spring ring "328", wherein the bias is the undeflected state of the mirror "302", Figures 3-4); wherein the flexure stores energy due to the bias in response to any re-positioning of the micro-mirror array from a default orientation (Column 8, lines 31-49, wherein the spring ring "328"

flexes and therefore stores energy in response to contact with the mirror "302" at nubs "330", Figures 3-7), and wherein the flexure releases the stored energy to drive movement of the micro-mirror when a force against the bias is relaxed (Column 8, lines 31-49, wherein the spring ring "328" stores potential energy when the mirror is deflected and releases the stored energy when the mirror "302" is returned to the undeflected state, i.e. re-oriented, Figures 3-4).

Regarding claim 32, Meier et al further discloses that the flexure holds the micro-mirror in said default orientation to the bias when the flexure is not driven (Column 8, lines 16-63, wherein the flexure "328" holds the mirror in an undeflected state when not driven, Figures 3-4).

Regarding claim 33, Meier et al further disclose the pliant flexure comprising: a post (Figures 3-4, wherein the posts are "116"); a flexure member supported on the post (Column 8, lines 16-63, wherein the flexure comprises spring ring "328", torsion beams "320", and yoke "314", Figures 3-4); and supports on the flexure for supporting the micro-mirror (Column 12, lines 26-48, wherein the supports on the flexure are the torsion beams "320", which connect beam yoke "314" and spring ring "328", wherein support "326" connects yoke "314" to micro-mirror "302", Figures 3-4).

Regarding claim 35, Meier et al further discloses a set of electrodes for electrostatically driving the pliant flexure to controllably orient the micro-mirror (Column 8, lines 50-63, wherein the electrodes "310" drive the spring "328" to orient micro-mirror "302", Figures 3-4).

Regarding claim 36, Meier et al further discloses drive circuitry for driving the flexure to orient the micro-mirror (Column 8, lines 50-63 and Column 16, lines 16-19, wherein the electrodes "310" and metallization "312" comprise the drive circuitry that drives the spring "328" to orient micro-mirror "302", Figures 3-4).

Regarding claim 37, Meier et al further discloses that the flexure runs diagonally between opposite corners of the micro-mirror (Column 8, lines 16-63, wherein the flexure comprises spring ring "328", torsion beams "320", and yoke "314" and the torsion beams "320" and yoke "314" run diagonally between the corners of the micro-mirror "302", Figures 3-4).

Regarding claim 38, Meier et al further discloses the flexure has a non-uniform width (Shown in Figures 3-4, wherein the spring ring "328", torsion beams "320", and yoke "314" do not have a uniform width).

Regarding claim 39, Meier et al further discloses that the flexure comprises a plurality of flexures extending from the post along an underside of the micro-mirror (Shown in Figures 3-4, wherein the plurality of flexures are torsion beams "320", which are extensions from the flexure spring "328").

Regarding claim 40, Meier et al further discloses a device comprising a plurality of micro-mirror in an array (Column 8, lines 16-63, wherein the DMD comprises an array of micro-mirrors, Figure 3).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 47-52 are rejected under 35 U.S.C. 102(e) as being anticipated by Pan.

Regarding claim 47, Pan discloses a micro-mirror device comprising: a micro-mirror (Sections 41-43, wherein the micro-mirror is "102", Figure 2); and a flexure spring (Section 41,

wherein the flexure spring is deformable mirror hinge "106", Figure 2) wherein the mirror is supported exclusively on arms of the spring, with supports connected between the arms and opposite corners of the micro-mirror (Section 41, wherein the deformable mirror hinges, i.e. flexure springs "106", have arms, Figure 2 and supports"105" supporting opposite corners of the micro-mirror "102", Figure 2), wherein the flexure spring comprises a plurality of flexures disposed substantially parallel to each other (Section 54, wherein the flexures are shown in Figure 6) and extending between opposite corners of the micro-mirror, normal to an axis about which the micro-mirror tilts (Sections 41-43, wherein the flexures are shown in Figure 6, wherein the hinge "106" extends between the corners of mirror "102", Figure 2); wherein the flexure spring is configured to store potential energy during movement of the micro-mirror that is released as kinetic energy to drive movement of the micro-mirror when the micro-mirror is re-oriented (Sections 41-43, wherein the deformable hinge "106" stores potential energy to be released as kinetic energy to change the movement of the mirror "102", Figures 2-6).

Regarding claim 48, Pan further discloses that the supports have a square cross section with corners of the supports being matched to opposite corners of the micro-mirror (Sections 41-43, wherein the square supports "105" match the corners of the mirror "102", Figures 1a-b, 2-4).

Regarding claim 49, Pan further discloses that the plurality of flexures are unconnected arms extending from a central position (Figure 6).

Regarding claim 50, Pan further discloses that the plurality of flexures comprises: a flexure having the supports thereon connected to and for supporting the micro-mirror (Figure 6); and at least one other flexure which only applies force to the micro-mirror when the micro-

mirror tilts about the axis into contact with the at least one other flexure (Sections 41-43 and 54, Figures 2-6).

Regarding claim 51, Pan further discloses that the flexure spring is supported on a substrate in a dielectric liquid disposed on the substrate (Section 69, wherein the substrate is made by etching dielectric material).

Regarding claim 52, Pan further discloses that any re-positioning of the micro-mirror away from a default position is resisted by a bias of the flexure spring (Sections 41-43).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 9-12, 14, and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meier et al, as applied to independent claims 1, 13, and 31, as shown above in view of Pan.

Regarding claims 2, 9, and 12, Meier et al further discloses the flexure spring comprising: a post (Figures 3-4, wherein the posts are "116"); a flexure supported on the post (Column 8, lines 16-63, wherein the flexure comprises spring ring "328", torsion beams "320", and yoke "314", Figures 3-4); and supports on the flexure for supporting the micro-mirror (Column 12, lines 26-48, wherein the supports on the flexure are the torsion beams "320", which connect beam yoke "314" and spring ring "328", wherein support "326" connects yoke "314" to micro-mirror "302", Figures 3-4), but does not specifically disclose that the supports on the flexure are attached to and supporting opposite corners of the micro-mirror, that the flexure runs diagonally

between opposite corners of the micro-mirror, or that the supports have a square shape, with corners of the supports being matched with corners of the micro-mirror. Pan teaches of a micro-mirror device comprising a flexure spring, wherein the flexure spring has supports attached to and supporting opposite corners of the micro-mirror (Section 41, wherein the deformable mirror hinge, i.e. flexure spring "106" has supports "105" attached to and supporting opposite corners of the micro-mirror "102", Figure 2), wherein the flexure runs diagonally between opposite corners of the micro-mirror (Section 41, Figure 2), and wherein the supports have a square shape, with corners of the supports being matched with corners of the micro-mirror (Sections 41-43,wherein the square supports "105" match the corners of the mirror "102", Figures 1a-b, 2-4) for the purpose of providing the pre-determined angular rotation of the mirror as desired (Sections 41-43). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made for the flexure spring of Meier et al to further include supports on the flexure attached to and supporting opposite corners of the micro-mirror, wherein the flexure runs diagonally between opposite corners of the micro-mirror and wherein the supports have a square shape, with corners of the supports being matched with corners of the micro-mirror since Pan teaches of a micro-mirror device comprising a flexure spring, wherein the flexure spring has supports attached to and supporting opposite corners of the micro-mirror and wherein the supports have a square shape, with corners of the supports being matched with corners of the micro-mirror for the purpose of providing the pre-determined angular rotation of the mirror as desired.

Regarding claim 10, Meier et al and Pan disclose and teach of a micro-mirror device as shown above and Meier et al further discloses the flexure has a non-uniform width (Shown in

Figures 3-4, wherein the spring ring "328", torsion beams "320", and yoke "314" do not have a uniform width).

Regarding claim 11, Meier et al and Pan disclose and teach of a micro-mirror device as shown above and Meier et al further discloses that the flexure comprises a plurality of flexures extending from the post along an underside of the micro-mirror (Shown in Figures 3-4, wherein the plurality of flexures are torsion beams "320", which are extensions from the flexure spring "328").

Regarding claims 14, 21, and 24, Meier et al further discloses the flexure spring comprising: a post (Figures 3-4, wherein the posts are "116"); a flexure supported on the post (Column 8, lines 16-63, wherein the flexure comprises spring ring "328", torsion beams "320", and yoke "314", Figures 3-4); and supports on the flexure for supporting the micro-mirror (Column 12, lines 26-48, wherein the supports on the flexure are the torsion beams "320", which connect beam yoke "314" and spring ring "328", wherein support "326" connects yoke "314" to micro-mirror "302", Figures 3-4), but does not specifically disclose that the supports on the flexure are attached to and supporting opposite corners of the micro-mirror, that the flexure runs diagonally between opposite corners of the micro-mirror, or that the supports have a square shape, with corners of the supports being matched with corners of the micro-mirror. Pan teaches of a micro-mirror device comprising a flexure spring, wherein the flexure spring has supports attached to and supporting opposite corners of the micro-mirror (Section 41, wherein the deformable mirror hinge, i.e. flexure spring "106" has supports attached to an supporting opposite corners of the micro-mirror "103", Figure 2) wherein the flexure runs diagonally between opposite corners of the micro-mirror (Section 41, Figure 2) and wherein the supports

have a square shape, with corners of the supports being matched with corners of the micro-mirror (Sections 41-43,wherein the square supports "105" match the corners of the mirror "102", Figures 1a-b, 2-4) for the purpose of providing the pre-determined angular rotation of the mirror as desired (Sections 41-43). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made for the flexure spring of Meier et al to further include supports on the flexure attached to and supporting opposite corners of the micro-mirror, wherein the flexure runs diagonally between opposite corners of the micro-mirror since Pan teaches of a micro-mirror device comprising a flexure spring, wherein the flexure spring has supports attached to and supporting opposite corners of the micro-mirror and wherein the supports have a square shape, with corners of the supports being matched with corners of the micro-mirror for the purpose of providing the pre-determined angular rotation of the mirror as desired.

Regarding claim 22, Meier et al and Pan disclose and teach of a micro-mirror device as shown above and Meier et al further discloses the flexure has a non-uniform width (Shown in Figures 3-4, wherein the spring ring "328", torsion beams "320", and yoke "314" do not have a uniform width).

Regarding claim 23, Meier et al and Pan disclose and teach of a micro-mirror device as shown above and Meier et al further discloses that the flexure comprises flexures extending from the post along an underside of the corresponding micro-mirror (Shown in Figures 3-4, wherein the plurality of flexures are torsion beams "320", which are extensions from the flexure spring "328").

Claims 3, 15, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meier et al, as applied to independent claims 1, 13, and 31 as shown above, in view of Culp.

Regarding claims 3, 15, and 34, Meier et al discloses a spatial light modulation device comprising an array of micro-mirrors as shown above, but does not specifically disclose that the means for selectively positioning the micro-mirror, specifically the pliant flexure spring, comprise a piezoelectric element configured to orient the corresponding micro-mirror. Culp teaches of a mirror which is oriented by springs driven by piezoelectric elements (Column 2, line 5-Column 3, line 21, wherein the piezoelectric elements "14, 16, 18, 20, and 22"/"64" drive spring means "32"/"56" which orient mirror "28"/"54", Figures 1-3) for the purpose of imparting energy and detecting energy and to supply signal as to the force or magnitude or direction of impact of the mirror and to thrust the mirror in the selected positions (Column 3, lines 14-21). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made for the micro-mirror device of Meier et al as shown above to further include the means for selectively positioning the micro-mirror, specifically the pliant flexure spring, comprising a piezoelectric element configured to orient the corresponding micro-mirror since Culp teaches of a mirror which is oriented by springs driven by piezoelectric elements for the purpose of imparting energy and detecting energy and to supply signal as to the force or magnitude or direction of impact of the mirror and to thrust the mirror in the selected positions.

Claims 8 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meier et al, as applied to independent claims 1 and 13 as shown above, in view of Shrauger et al.

Regarding claims 8 and 20, Meier et al discloses an array of micro-mirrors as shown above, but does not specifically disclose that the substrate comprises glass. Shrauger et al teaches of a device including mirrors oriented by springs located on a substrate comprising glass (Column 2, line 61-Column 3, line 35) for the purpose of providing a substrate transparent to the

optical spectrum to assure maximum optical power (Column 3,lines 7-35). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made for the array of micro-mirrors of Meier et al to further include a substrate made of glass since Shrauger et al teaches of a device including mirrors oriented by springs located on a substrate comprising glass for the purpose of providing a substrate transparent to the optical spectrum to assure maximum optical power.

***Response to Arguments***

Applicant's arguments filed May 23, 2005, regarding independent claims 1, 13, and 31 have been fully considered but they are not persuasive. Specifically, regarding these claims, applicant argues that Meier et al does not disclose a flexure spring supporting a micro-mirror. The examiner disagrees since the flexure spring of Meier et al supports the mirror by flexing upon contact with the mirror (Column 8, lines 16-63, wherein the spring "328" flexes due to contact with mirror "302" at nub "330" and therefore supports mirror "302", as shown in Figures 3-7). Additionally, since the flexure spring of Meier et al controls the rotation of the mirror when contacting the mirror (Column 8, lines 16-63), it therefore supports the mirror. Applicant's arguments, with respect to the rejection(s)of claim(s) 2 and 9 under Meier et al have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Meier et al in view of Pan.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yasuda et al, Barnea et al, and Guo et al read on with the current invention, but were

not used in the above rejections since multiple rejections would be repetitious since they both disclose mirrors movable by a flexure springs which store and release energy.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica T. Stultz whose telephone number is (571) 272-2339. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jessica Stultz
Patent Examiner
AU 2873
July 26, 2005

JORDAN SCHWARTZ
PRIMARY EXAMINER